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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	David W. Brown et al.	)	Attorney's Ref.: P214419
Serial No.:	10/761,537	)	Art Unit: 2188
Filed:	01/21/2004	)	
Title:	MOTION CONTROL SYSTEMS	)	

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Sir:

In accordance with 37 CFR §1.56, the Applicant respectfully submits this Supplemental Information Disclosure Statement to call to the attention of the Examiner the references listed on the attached Forms PTO/SB/08A and PTO/SB/08B for consideration in the prosecution of the above-referenced application for U.S. patent.

The references listed on the attached Form PTO/SB/08A, citation numbers 1-67, and on the attached form PTO/SB/08B, citation numbers 1-58, were disclosed by the Applicant and/or introduced by the Examiner during the prosecution of parent application Serial No. 10/316,451. Therefore, copies of these references are not enclosed herewith, but can be provided at the Examiner's request.

Newly added references are listed on the attached Forms PTO/SB/08A, citation numbers 68-127, and PTO/SB/08B, citation numbers 59-69, and are discussed below. Copies of the newly added non-patent literature references are enclosed herewith.

Citation of a reference in this Information Disclosure Statement is not an admission that the reference is prior art to the present invention.

It is believed that no fee is due at this time to maintain the application in full force and effect, however if any such fee is due please charge this to Deposit Account No. 502099.

REMARKS

I. U.S. PATENTS

U.S. Patent No. 6,292,174 to Mallet et al. discloses an interface device that provides cursor control with force feedback. A display screen is divided into border interior regions with different cursor movement characteristics in different regions.

U.S. Patent No. 6,028,593 to Rosenberg et al. discloses a system for simulated physical interaction by a user with simulated objects displayed on a computer. Force feedback is provided based on a mapping position on the simulated object and the physical position of the user object.

U.S. Patent No. 5,821,920 to Rosenberg et al. discloses an apparatus for interfacing a flexible object with an electrical system.

U.S. Patent No. 6,147,647 to Tassoudji et al. discloses a resonator antenna comprising a resonator formed from a dielectric material.

U.S. Patent No. 6,366,272 to Rosenberg et al. discloses a force feedback interface device where a simulated object on the screen manipulates a physical object of the interface device.

U.S. Patent No. 6,353,850 to Wies et al. discloses a force feedback interface device in which the force feedback is based on a force effect file incorporated into a Web page.

U.S. Patent No. 6,061,004 to Rosenberg discloses a force feedback system in which the position of a user controlled object is detected and a graphical object is displayed on a display screen at a position corresponding to the position of the physical object.

U.S. Patent No. 6,046,727 to Rosenberg et al. discloses a position sensing interface in which a manipulateable object is coupled to a mechanical linkage. Sensors detect movement of the mechanical linkage, and a dedicated microprocessor provides a host computer with information from the sensors.

U.S. Patent No. 6,219,032 to Rosenberg et al. discloses a force feedback interface device in which the desired force sensation is generated based on graphical objects, inner operating system functions, and a location of the cursor.

U.S. Patent No. 6,078,308 to Rosenberg et al. discloses a force feedback system in which, when a mouse encounters a click surface defined by a graphical user interface, a force is output opposing movement of a user object in the direction of the click surface.

U.S. Patent No. 6,317,116 to Rosenberg et al. discloses a system for providing a click surface in a graphical environment that, when in contact with the cursor, causes a force to be generated opposing movement of the user object.

U.S. Patent No. 6,246,390 to Rosenberg discloses an input device for computers.

U.S. Patent No. 6,100,874 to Schena et al. discloses a mouse having force feedback capabilities.

U.S. Patent No. 6,166,723 to Schena et al. discloses a mouse having force feedback capabilities.

U.S. Patent No. 6,128,006 to Rosenberg et al. discloses a mouse having a cursor control wheel that is provided with force feedback capabilities.

U.S. Patent No. 6,243,078 to Rosenberg discloses a system for generating force feedback using conventional mouse buttons and wheels coupled to an actuator.

U.S. Patent No. 6,191,774 to Schena et al. discloses an interface for applying force feedback to a computer mouse.

U.S. Patent No. 6,131,097 to Peurach et al. discloses a system for authoring a geometrical database incorporating touch or haptic feedback.

U.S. Patent No. 6,374,255 to Peurach et al. discloses a method of offering geometrical databases that incorporate touch or haptic feedback.

U.S. Patent No. 6,285,351 to Chang et al. discloses an interface tool for allowing a user to design force sensations for use with a force feedback interface device.

U.S. Patent No. 6,300,936 to Braun et al. discloses an architecture for allowing a plurality of application programs to interface with a force feedback interface device without conflicts.

U.S. Patent No. 6,304,091 to Shahoian et al. discloses a capacitive position sensor that generates a signal having a phase shift relative to an input driver signal based on relative positions of a vane and a stator.

U.S. Patent No. 6,288,705 to Rosenberg et al. discloses a force feedback interface system for computers in which indexing features allow control of the cursor when an offset between local and display frames exists.

U.S. Patent No. 5,438,529 to Rosenberg et al. discloses a percussion system that functions both as a percussion signal input device and a mouse for a personal computer.

U.S. Patent No. 5,623,582 to Rosenberg discloses a system for converting movement of an object into electrical signals that may be processed by a computer.

U.S. Patent No. 5,576,727 to Rosenberg et al. discloses a linkage system the movement of which is transduced into electrical signals that are processed by an application on a computer. Force feedback commands are transmitted back to the linkage apparatus. The linkage apparatus converts the force feedback commands into movement that is felt by the user.

U.S. Patent No. 5,691,898 to Rosenberg et al. discloses a computer input device that generates force feedback movement based on operation of a switch at the device and on force feedback commands generated by the host computer system.

U.S. Patent No. 6,057,828 to Rosenberg et al. discloses a force feedback mechanism for a host computer. A local microprocessor on the force feedback mechanism receives

command from the host, decodes the commands, and outputs actuator signals to a mechanical system. The commands simulate touch sensations such as moving through fluids or impacting a surface or obstruction.

U.S. Patent No. 6,271,833 to Rosenberg et al. discloses a force feedback device in which the device is enabled only when an amount of weight over a predetermined amount is placed on the joystick of the device.

U.S. Patent No. 5,889,672 to Schuler et al. discloses an interface device for computers having programmable force position characteristics. The force position characteristics relay the tactile responsiveness of the device to the position of a cursor on a display screen.

U.S. Patent No. 6,195,592 to Schuler et al. discloses a force feedback interface system having tactile responsiveness that is flexibly programmable.

U.S. Patent No. 6,169,540 to Rosenberg et al. discloses a software interface for allowing a user to design force sensations for use by a force feedback interface device connected to a host computer.

U.S. Patent No. 5,701,140 to Rosenberg et al. discloses a linkage system the movement of which is transduced into electrical signals that are processed by an application on a computer. Force feedback commands are transmitted back to the linkage apparatus. The linkage apparatus converts the force feedback commands into movement that is felt by the user.

U.S. Patent No. 5,739,811 to Rosenberg et al. discloses a system that send sensor data from a user interface device to a host computer. The system can operate on a host controlled environment in which force values are generated by the host computer or in a reflex environment in which force values are generated by a processor at the interface device given high levels of advisory commands generated by the host computer.

U.S. Patent No. 5,734,373 to Rosenberg et al. discloses a force feedback system for use by a host computer and a force feedback device. A local microprocessor at the force feedback device implements a local reflex process based on high level commands to generate force values for actuators at the force feedback device. The programmer of the host computer deals only with a relatively few high level host commands, with the bulk of the force feedback computation being handled at the local processor.

U.S. Patent No. 6,104,158 to Jacobus et al. discloses a force feedback system that simulates the presence of a force field around the user. This system includes a six-axis manipulator having two constant force springs that provide gravity compensation so that the manipulator floats.

U.S. Patent No. 6,219,033 to Rosenberg et al. discloses an input device for a computer having a local microprocessor that controls an actuator within the input device and provides sensor data to a host computer.

U.S. Patent No. 6,300,937 to Rosenberg discloses a force feedback interface device that operates in a host controlled embodiment or in a reflex embodiment.

U.S. Patent No. 6,232,891 to Rosenberg discloses a force feedback interface device that operates in isotonic and isometric control modes.

U.S. Patent No. 6,252,853 to Ohno discloses a label switching router employing a fault circumventing route table that allows continued communication between adjacent nodes on opposite sides of an ATM switch if a fault occurs on the data relay controller.

U.S. Patent No. 6,278,439 to Rosenberg et al. discloses a system for shaping force signals for a force feedback device.

U.S. Patent No. 6,343,349 to Braun et al. discloses a force feedback system in which a representation of a memory device of a force feedback interface device is stored by the host computer.

U.S. Patent No. 6,259,382 to Rosenberg discloses a force feedback system that operates in isotonic and isometric control modes.

U.S. Patent No. 6,020,876 to Rosenberg et al. discloses a force feedback system having a disturbance filter for reducing or eliminating disturbances associated with the output force sensations. The filter removes the effect of feedback forces that would otherwise cause a controlled graphical object to be displayed in an undesired location.

U.S. Patent No. 6,310,605 to Rosenberg discloses a force feedback device that employs a selective disturbance filter to reduce or eliminate displayed disturbances associated with output force sensations.

U.S. Patent No. 5,959,613 to Rosenberg et al. discloses a force feedback system in which force signals sent to a force feedback device are shaped by a set of control parameters and modified by a set of impulse parameters.

U.S Patent No. 5,889,670 to Schuler et al. discloses a force feedback system for computer input in which the force position characteristics of the system are programmable and responsive to a position of the cursor on a display screen.

U.S. Patent No. 5,825,308 to Rosenberg discloses an interface for a feedback system. The interface system displays a physical object moveable in a physical space. In an isotonic mode, force sensations are applied to the physical object based on movement of the cursor and

position of the physical object. In an isometric mode, input force applied by the user to the physical object results in input to the host computer.

U.S. Patent No. 6,252,579 to Rosenberg et al. discloses a force feedback interface device that employs a scaled cursor position in a display frame derived from a reference position of the mouse.

U.S. Patent No. 6,366,273 to Rosenberg et al. discloses a force feedback cursor control interface in which a host computer is interfaced with a device microprocessor.

U.S. Patent No. 6,292,712 to Bullen discloses a multimedia interface system that incorporates text, audio, and video graphics with an outside environment such as a robotic device, machining device, or other tool.

U.S. Patent No. 6,292,714 to Okabayashi discloses a system for integrating robot motion with content software running on a computer.

U.S. Patent No. 6,480,896 to Brown et al. discloses a method of communicating motion data through a communications network.

U.S. Patent No. 5,848,415 to Guck discloses a content server that uses an object database to support a network of clients. Virtual objects in the database enable the format of any source document to be converted to another compatible format to transport the appropriate protocol.

U.S. Patent No. 6,173,316 to De Boor et al. discloses an extended form of HTML adapted for use by wireless telephones.

U.S. Patent No. 6,038,603 to Joseph discloses a system in which a URL contains first and second values corresponding to presence of an encapsulating protocol and an operation protocol. A second computer provides a resource store that is accessed in accordance with the operation protocol.

U.S. Patent No. 4,769,771 to Lippmann et al. discloses a multiprocessor computer system. This system defines a mailbox space for each super processor where other processes can write but only the associated super processor can read.

U.S. Patent No. 5,724,074 to Chainani et al. discloses a system for programming mobile toys. This system employs graphical representations of features of the toy along with a grid. The user generates and instructions set for the toy using the graphical elements and grid.

U.S. Patent No. 6,497,606 to Fong et al. discloses remotely programmable toys such as dolls that perform a sequence of actions in response to one another.

U.S. Patent No. 6,290,565 to Galyean III et al. discloses a three dimensional toy that may be controlled using a computer. In particular, the toy comprises a toy body to which

accessory parts are added. A computer is notified each time and accessory part is added or removed to the body.

II. NON-PATENT LITERATURE REFERENCES

"A Motion Control System with Event-driven Motion-module Switching Mechanism for Robotic Manipulators" by Katayama et al., dated July, 1993. This reference disclosed a motion control system that employs an event-driven motion module switching mechanism.

"An Event-Driven Architecture for Controlling Behaviors of the Office Conversant Mobile Robot, Jijo-2" by Matsui et al., dated April 1997. This document discloses a layered process network architecture based on an event-driven control model.

"How to Write and Use ActiveX Controls for Microsoft Windows CE 3.0" by Microsoft Corporation, dated June, 2000. This document discloses how to build and distribute ActiveX controls for Windows CE.

"Notes on Implementing an OLE Control Container" by K. Brockschmidt of Microsoft Corporation, dated September 21, 1994. This document discloses the programming of container applications that can interact and exploit OLE controls.

"What OLE Is Really About" by K. Brockschmidt of Microsoft Corporation, dated July, 1996. This document discusses how OLE addresses practical problems encountered in operating systems and applications.

"Categorizing by Component Capabilities" by Microsoft Corporation, dated November, 2001. This document discusses the use of category IDs to identify component categories.

III. U.S. PATENT APPLICATION PUBLICATIONS

U.S. Publication No. 2002/0165627 to Brown et al. discloses a motion control system for controlling a target device for performing a desired motion operation.

U.S. Publication 2002/0052939 to Lee discloses a system for distributing data recovery information over a communications network using a web server.

U.S. Publication 2001/0020944 to Brown et al. discloses control software for generating and distributing motion media for operating a target motion device.

U.S. Publication 2001/0032268 to Brown et al. discloses a system for allowing an application program to communicate with any one of the group supported hardware devices.

U.S. Publication 2002/0177453 to Chen et al. discloses a system that allows mobile devices and protocols to communicate with each other. A component referred to as a let engine communicates with devlets, infolets, and applets.

CONCLUSION

The Applicant respectfully submits that the cited references in this case, taken alone or in combination, neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to the pending application is respectfully requested. If there is any matter which needs attention, and if the Examiner feels that consultation with the applicant's attorney, the undersigned herein, would be of value, then such consultation would be welcome. The applicant's attorney can be reached at the phone number noted below.

Signed at Bellingham, County of Whatcom, State of Washington, this 22nd day of July, 2004.

Respectfully submitted,

DAVID W. BROWN ET AL.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 6

Complete if Known	
Application Number	10/761,537
Filing Date	01/21/2004
First Named Inventor	David W. Brown
Group Art Unit	2188
Examiner Name	
Attorney Docket Number	P214419

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[2]	U.S. Patent Document Number	Kind Code[2]	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	5,746,602		Kikinis	05-1998	
	2	5,752,880		Gabai et al.	05-19-1998	
	3	5,733,131		Park	03-31-1998	
	4	5,636,994		Tong	06-10-1997	
	5	5,655,945		Jani	8-12-1997	
	6	4,846,693		Baer	07-11-1989	
	7	4,809,335		Rumsy	02-28-1989	
	8	5,846,132		Junkin	12-08-1998	
	9	5,707,289		Watanabe et al.	01-13-1998	
	10	5,800,268		Molnick	09-01-1998	
	11	5,801,946		Nissen et al.	09-01-1998	
	12	4,840,602		Rose	06-20-1989	
	13	4,857,030		Rose	08-15-1989	
	14	5,607,336		Lebensfeld et al.	03-04-1997	
	15	5,596,994		Bro	01-1997	
	16	5,377,258		Bro	12-1994	
	17	4,897,835		Gaskill	01-1990	
	18	4,713,808		Gaskill	12-1987	
	19	5,666,161		Kohiyama et al.	09-09-1997	
	20	5,790,178		Shibata et al.	08-04-1998	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	21		EP0508912 A1		European Patent Office	10-14-1992		
	22		0275826 A1		European Patent Office	07-1998		
	23		0442676 A2		European Patent Office	08-1991		
	24		WO 95/07504		WIPO	03-1995		
	25		0 281 427 B1		Pierce et al.	08-05-1992		
	26		0 583 908 A2		Edgar et al	02-23-1994		
	27		Japanese 59 228473			06-09-1983		
	28		GB 2 244 896 A		Powell	12-11-1991		
	29		WO 92/11731		WIPO/Bell	07-09-1992		
	30		WO 93/08654		WIPO/Stillman et al.	04-29-1993		

Examiner Signature		Date Considered	

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1 Unique citation designation number 2 See attached Kinds of U.S. Patent Documents 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3) 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible 6 Applicant is to place a check mark here if English language Translation is attached.

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Sheet 2 of 6

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	31	5,493,281		Owens	02-20-1996	
	32	5,453,933		Wright et al.	09-1995	
	33	4,531,182		Hyatt	07-1985	
	34	4,937,737		Schwane et al.	06-1990	
	35	5,095,445		Sekiguchi	03-1992	
	36	5,126,932		Wolfson et al.	06-1992	
	37	5,175,817		Adams et al.	12-1992	
	38	5,245,703		Hubert	09-1993	
	39	5,247,650		Judd et al.	09-1993	
	40	5,390,330		Talati	02-1995	
	41	5,491,813		Bondy et al.	02-1996	
	42	5,604,843		Shaw et al.	02-1997	
	43	5,608,894		Kawakami et al.	03-1997	
	44	5,168,441		Onarheim et al.	12-1992	
	45	5,392,207		Wilson et al.	02-1995	
	46	5,412,757		Endo	05-1995	
	47	5,465,215		Strickland et al.	11-1995	
	48	4,159,417		Rubincam	06-26-1979	
	49	4,767,334		Thorne et al.	08-30-1988	
	50	4,855,725		Fernandez	08-08-1989	

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	51	4,887,966		Gellerman	12-19-1989	
	52	5,120,065		Driscoll et al.	06-09-1992	
	53	5,402,518		Lowery	03-28-1995	
	54	5,450,079		Dunaway	09-12-1995	
	55	5,670,992		Yasuhara et al.	09-23-1997	
	56	5,737,523		Callaghan et al.	04-07-1998	
	57	5,652,866		Aldred et al.	07-29-1997	
	58	4,418,381		Molusis et al.	11-29-1983	
	59	5,764,155		Kertesz et al.	06-09-1998	
	60	5,617,528		Stechmann et al.	04-01-1997	
	61	5,956,484		Rosenberg et al.	09-21-1999	
	62	6,101,530		Rosenberg et al.	08-08-2000	
	63	6,161,126		Wies et al.	12-12-2000	
	64	6,125,385		Wies et al.	09-26-2000	
	65	6,292,170		Chang et al.	09-18-2001	
	66	6,470,377		Sevcik et al.	10-22-2002	
	67	6,401,005		Schwarz et al.	06-04-2002	
	68	6,292,174		Mallett et al.	09-18-2001	
	69	6,028,593		Rosenberg et al.	02-22-2000	
	70	5,821,920		Rosenberg et al.	10-13-1998	

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	71	6,147,647		Tassoudji et al.	11-14-2000	
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	73	6,353,850		Wies et al.	03-05-2002	
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	88	6,300,936		Braun et al.	10-09-2001	
	89	6,304,091		Shahoian et al.	10-16-2001	
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Sheet 5 of 6

Complete if Known	
Application Number	10/761,537
Filing Date	01/21/2004
First Named Inventor	David W. Brown
Group Art Unit	2188
Examiner Name	
Attorney Docket Number	P214419

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(use as many sheets as necessary)

Sheet	7	of	7

Complete if Known	
Application Number	10/761,537
Filing Date	01/21/2004 .
First Named Inventor	David W. Brown
Group Art Unit	2188
Examiner Name	
Attorney Docket Number	P214419

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[6]
	61	MICROSOFT CORPORATION; "How to Write and Use ActiveX Controls for Microsoft Windows CE 3.0"; Windows CE 3.0 Technical Articles; June, 2000; pp. 1-5.	
	62	MICROSOFT CORPORATION; "Notes on Implementing an OLE Control Container"; ActiveX Controls Technical Articles; September 21, 1994; pp. 1-47.	
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	65	U.S. Publication No. 2002/0165627 to Brown et al.	
	66	U.S. Publication No. 2002/0052939 to Lee	
	67	U.S. Publication No. 2001/0020944 to Brown et al.	
	68	U.S. Publication No. 2001/0032268 to Brown et al.	
	69	US Pub. No. 2002/0177453 to Chen et al.	

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1 Unique citation designation number 2 Applicant is to place a check mark here if English language Translation is attached.